Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service	)	GN Docket No. 96-228
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	)	

To: The Commission

COMMENTS OF

THE ARCHDIOCESE OF LOS ANGELES EDUCATION AND WELFARE CORPORATION

THE DIOCESE OF ORANGE EDUCATION AND WELFARE CORPORATION

CARITAS TELECOMMUNICATIONS, INC. AND

GENESEE INTERMEDIATE SCHOOL DISTRICT

ON THE WIRELESS CABLE ASSOCIATION INTERNATIONAL, INC.'S PETITION FOR EXPEDITED RECONSIDERATION

The Archdiocese of Los Angeles Education and Welfare Corporation ("Archdiocese"), the Diocese of Orange Education and Welfare Corporation ("Diocese"), Caritas Telecommunications, Inc. ("Caritas"), and Genesee Intermediate School District ("Genesee") (jointly referred to as the "ITFS Licensees") hereby submit these comments on the Petition for Expedited Reconsideration[1/] regarding the Report and Order in the above-captioned proceed-

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[1/] *Petition for Expedited Reconsideration* filed by The Wireless Cable Association International, Inc. in GN Docket No. 96-228 (Mar. 10, 1997) (*Petition*).

ing concerning Wireless Communications Service (WCS).[2/] These comments support the imposition of a 20 watt Equivalent Isotropically Radiated Power (EIRP) limitation on WCS devices to prevent harmful blanketing interference to Instructional Television Fixed Service (ITFS) and Multipoint Distribution Service (MDS) receivers.

I. INTRODUCTION

The Archdiocese has been licensed by the FCC to operate a four-channel ITFS facility from a site at Mt. Wilson for over 30 years.[3/] The facility has been used to provide instructional, cultural, and religious programming to hundreds of parochial schools and thousands of students in the Los Angeles vicinity. The Diocese has been licensed by the FCC to operate a four-channel ITFS facility from a site at Modjeska Peak, California for approximately 20 years.[4/] The Diocese provides educational television to the schools and parishes and other selected sites of the Roman Catholic Diocese of Orange, California. Caritas holds several ITFS licenses and serves as the educational television provider for the schools and parishes of the Diocese of San Bernardino.[5/] Because of the full-curriculum programming that it offers, Caritas also provides programming to public schools, home-schools, and other private schools within its coverage area. Genesee is nearing completion of a fiber optic network that will serve the educational needs of over 90,000 students in

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[2/] *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service, Report and Order*, FCC 97-50 (rel. Feb 19, 1997) (*WCS Order*).

[3/] KSW-93, channels G1-G4, Los Angeles.

[4/] WHG-396, channels G1-G4, Los Angeles.

[5/] Together, Caritas and the Diocese of San Bernardino are licensees of WHG-356, channels D1-D4, Running Springs; WLX-238, channels D1-D4, Riverside; WHR-904, channels G1-G4, North Palm Springs; WHR-927, channels B1-B4, Beaumont.

twenty-one local school districts and four institutions of higher education. Genesee intends to obtain an ITFS license to expand its educational programming efforts.

The ITFS Licensees strongly believe that the Commission must act to impose a power limit on WCS operations to preserve ITFS and MDS reception. A failure to do so could be detrimental to the vital educational operations of the ITFS Licensees.

II. DISCUSSION

A. The Proposed Power Limitation is Consistent With The Commission Policy To Promote and Protect The Growth Of ITFS and MDS

Over the last twenty-five years, the Commission has recognized the importance and potential of ITFS. The Commission has expressed the need for rules to enhance the efficient use of ITFS and to reduce the costs associated with ITFS operations, thereby improving the viable use of this spectrum.[6/] During the past decade, the Commission has kept close tabs on the status of ITFS, and has implemented steps to assist ITFS systems where necessary.[7/]

The Commission has also long promoted wireless cable as "one of the most promising sources of multichannel competition in the local market."[8/] The Commission has conducted a number of proceedings with the goal of removing regulatory obstacles to the growth of

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[6/] *Amendment of Part 74 of the Commission's Rules and Regulations in regard to the Instructional Television Fixed Service*, 98 FCC 2d 925, 937 (1984).

[7/] *See, e.g., id.* (relaxing the technical standards for ITFS transmissions, recognizing that the costs imposed on school districts and other educational and nonprofit institutions to meet the prior standards were counterproductive to the development of ITFS systems.)

[8/] *Competition, Rate Deregulation and the Commission's Policies Relating to the Provision of Cable Television Service*, 5 FCC Rcd 362, 367 (1990).

wireless cable as a viable contender in the multichannel video distribution arena.[9/] Thus, the Commission has displayed a commitment to the continuing vitality of both ITFS and MDS.

In the *WCS Order*, the FCC abruptly reverses its sensible efforts to protect ITFS and MDS spectrum from harmful interference. The Commission created WCS in frequency bands close to ITFS and MDS, and placed no power limitation on the transmitters, which may well be located in a grid pattern covering an entire metropolitan area.[10/] The harm that could result is amply demonstrated in the *Petition* and in the Engineering Exhibit attached hereto.[11/] The *Petition* proposes a simple measure, a 20-watt EIRP limitation, that would cure the harm. The ITFS Licensees understand that the Omnibus Consolidated Appropriations Act demanded that the Commission act quickly to establish service rules for the WCS. However, the Commission must impose a power limitation on WCS licensees that will shelter ITFS and MDS licensees from interference.

B. A Case-By-Case Approach To Destructive Interference Would Damage ITFS Educational Efforts

In the *WCS Order*, the FCC proposed to handle any interference that may occur to ITFS operations on a post hoc, case-by-case basis.[12/] Although the Commission may have

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[9/] *See Amendment of Parts 1, 2, and 21 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands*, 8 FCC Rcd 1444, 1444 (1993).

[10/] For example, WCS could be used to provide wireless local loop services, wireless data services or a variety of PCS-like services, all of which could employ a cellular-like architecture. *See WCS Order* at ¶ 27.

[11/] *Engineering Statement of Michael Collis* (attached).

[12/] *WCS Order* at ¶ 157.

successfully implemented a post hoc approach to interference in other services, it has always taken the opposite approach in the realm of ITFS. The Commission protects ITFS licensees from interference as an initial matter, before any interference can occur, not on a case-by-case basis after interference has already occurred. For example, the Commission's rules require that MDS and ITFS applications contain an analysis of potential interference with any licensed or proposed co-channel or adjacent-channel ITFS station.[13/] Further, one of the goals of the Commission has been to assure that new MDS facilities will not cause harmful electromagnetic interference to the authorized and previously proposed services of MDS "incumbents" and ITFS operators.[14/]

The ITFS Licensees have a twofold interest in the elimination of blanketing interference by the imposition of a power limitation on WCS licensees. First, ITFS Licensees have an obvious concern in the quality of their own educational transmissions. WCS interference could have a devastating impact on their operations, resulting in a loss of the public benefits provided by educational programming. Instructional programming currently provided to public and private primary and secondary schools, colleges, universities, and graduate schools could be lost because of interference from WCS.

Second, ITFS licensees have a stake in the wireless cable industry because of their excess capacity lease arrangements with wireless cable providers. In allowing these types of lease arrangements, the Commission intended that payments for excess capacity by wireless

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[13/] 47 C.F.R. § 74.903(b); 47 C.F.R. 21.902(i).

[14/] *Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service*, 10 FCC Rcd 13821, 13826 (1995).

cable providers would serve as a financial support system for ITFS licensees.[15/] Since ITFS licensees typically operate on restricted budgets, the added income from these lease agreements can have a substantial influence on the use and development of ITFS. If blanketing interference renders ITFS licensees' excess capacity less valuable to wireless cable providers, ITFS licensees will lose a significant amount of financial support, which will in turn impact their provision of educational programming.

The Commission should act to protect ITFS licensees from interference not only to maintain consistency in its approach to ITFS, but also to ensure that students and educators will not be denied access to valuable programming pending the regulatory resolution of an interference issue. An interruption of ITFS service for students awaiting the next lecture in a distance learning series, for instance, creates more than a mere inconvenience; it seriously disrupts the educational process for those individuals.

C. A Migration To Digital Technology Will Not Solve The Interference Problem When It Does Occur

The Commission has apparently assumed that, in connection with a migration to digital technology, the wireless cable industry is "converting to newer, more robustly designed downconverters that have vastly improved frequency selectivity and would not

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[15/] *See, e.g., MDS Second Order on Reconsideration*, 10 FCC Rcd 7074, 7078 ("We believe strengthening MDS operators will have important secondary benefits for ITFS licensees, and better enable them to meet their educational service objectives."), *Amendment of Part 74 of the Commission's Rules Governing Use of the Frequencies in the Instructional Television Fixed Service*, 9 FCC Rcd 3360, 3364 (1994) (encouraging ITFS licensees "to cultivate their partnerships with wireless cable operators, an arrangement we have sought to nurture over the last decade, to the welfare of the ITFS service and the public.").

receive WCS signals."[16/] As pointed out in the *Petition*, the Commission's assumption that interference problems will be solved by a transition to digital technology is incorrect.[17/] It is impossible for equipment manufacturers to design downconverters that will eliminate blanket interference from WCS where there are no power limitations on WCS licensees.[18/] Further, even if such a transition would remedy any difficulty with interference, many ITFS licensees do not plan on converting to digital technology any time in the near future, and thus will not be replacing their installed base of downconverters with the newer downconverters contemplated by the Commission.

III. CONCLUSION

It is imperative to the continuing integrity of ITFS that the Commission grant the *Petition* and impose the requested 20 watt EIRP limitation upon WCS. The Commission should act, as it has in the past, in the interests of ITFS service providers, the wireless cable

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[16/] *WCS Order* at ¶ 157.

[17/] *Petition* at 11-13.

[18/] *Id.* at 12.

industry, and members of the public who benefit from ITFS educational and instructional programming.

Respectfully submitted,

THE ARCHDIOCESE OF LOS ANGELES
EDUCATION AND WELFARE CORPORATION

By: David G. Moore /JTN

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CARITAS TELECOMMUNICATIONS, INC.

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GENESEE INTERMEDIATE SCHOOL DISTRICT

By: Rachael E. Moreno/JTN

Dated: March 21, 1997

CARITAS TELECOMMUNICATIONS

DIOCESE OF SAN BERNARDINO

Engineering Statement from Caritas Telecommunications

I am the chief engineer for Caritas Telecommunications, an active ITFS broadcaster. I have 8.5 years of experience as a supervisor of radio and microwave maintenance for the County of San Bernadino, 25 years as an active ham radio operator, and have been employed by Caritas as its fulltime engineer since 1992.

In response to the Petition for Expedited Reconsideration Filed by Wireless Cable Association, I have some experience that may be of value.

The WCS is in close frequency range to MMDS & ITFS (within 200 MHz). MMDS & ITFS downconverters would suffer overload to the first RF amplifier due to insufficient filtering to reject the WCS high power systems transmitting in close proximity to most brands of downconverters used in wireless cable and ITFS today. This would require external preselection filters to be added before the downconverter, or change out to a converter like the Conifer HLN model that already has the filter built in. Most of the integrated downconverter-antenna combinations that are available and now in use cannot have this filter added.

I have first hand experience with this potential problem of overloading the MMDS-ITFS downconverter. In our area we have a Wireless Cable Service, and also Ham Radio Operators transmitting television on 2441.5 MHz to a Television repeater. Both the hams and wireless are using the same type of antenna and polarization and the hams typically use one watt of power into a 25 dBi antenna. In some cases when the wireless receive antenna is looking into the ham operator's antenna in the same neighborhood interference has been a problem. To eliminate the interferance the wireless operator had to change the downconverter of the subscriber receiving interferance to a Conifer HLN 3012 wireless downconverter that has a preselection filter built in.

The ham radio operators, who are few in number and normally operate at one watt power, have a small impact on the wireless operators. However, with the unlimited output power and antenna gain as WCS is proposed, WCS could cause severe interference when in close proximity to wireless cable and ITFS receive installations in homes and schools.

It has been a long-standing guideline of the FCC that it protect existing systems when proposing or enacting new measures and services. There is an obvious need to regulate the effective radiated power and/or proximity of the WCS to already existing ITFS/MMDS systems.

Respectfully submitted,

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Chief Engineer

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Comments of the Archdiocese of Los Angeles Education and Welfare Corporation, the Diocese of Orange Education and Welfare Corporation, Caritas Telecommunications, and Genesee Intermediate School District were delivered by hand this 21st day of March, 1997, to each person on the following service list.

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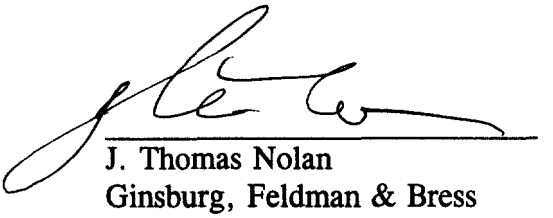

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